

## 40.420. FLOOD HAZARD AREAS

### 40.420.010 INTRODUCTION

- A. Purpose. It is the purpose of this chapter to:
1. Protect human life and health;
  2. Minimize expenditure of public money and costly flood control projects;
  3. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
  4. Minimize prolonged business interruptions;
  5. Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in areas of special flood hazard;
  6. Help maintain a stable tax base by providing for the sound use and development of flood hazard areas so as to minimize future flood blight areas;
  7. Ensure that potential buyers are notified that property is in a flood hazard area; and
  8. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.
- B. Applicability.
1. Land to Which This Chapter Applies. This chapter shall apply to all flood hazard areas within the jurisdiction of Clark County.
  2. Basis for Establishing the Flood Hazard Areas. The areas of special flood hazard identified by the Federal Emergency Management Agency in a scientific and engineering report entitled "The Flood Insurance Study for Clark County" (effective August 2, 1982 and revised July 19, 2000) and accompanying maps and any revisions thereto are hereby adopted by reference and declared to be a part of this chapter. The Flood Insurance Study is on file at Community Development department.
  3. Flood Plain Overlay District (FP). A Flood Plain Overlay District (FP) is hereby established and shall be applied to all one hundred (100)-year flood plains identified on the Flood Insurance Study Maps, which have been adopted by reference under Section 40.420.010(B)(2). The land use and siting provisions of these areas shall be in addition to other zoning provisions applied. Two distinct areas are recognized within the FP District, as follows:
    - a. Floodway Area. The floodway includes the channel of a river or other watercourse and land areas within 100 feet that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one (1) foot. For areas of special flood hazard studied in detail, the floodway boundary is delineated upon the Flood Insurance Study Maps. In all other areas of special flood hazard, the floodway boundary shall be determined by the use of other base flood data, as described in Section 40.420.030(B)(4).
    - b. Floodway Fringe Area. The floodway fringe is the land area between the boundary of the floodway and the limits of the one hundred (100)-year flood plain. In those special flood hazard areas where the floodway boundary is not delineated upon Flood Insurance Study Maps, the floodway fringe area shall be determined by the use of other base flood data, as described in Section 40.420.030(B)(4).
- C. Relationship to Other Requirements. Land uses in flood hazard areas shall be subject to all relevant local, state, or federal regulations including those of the underlying zoning district. Where applicable, permit requirements under the Shoreline Management Act (RCW 90.58), or the State Flood Control Zone Act (RCW 86.16) may be substituted for permits required under this chapter, provided that the standards of this chapter are applied.
- D. Compliance. No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this chapter and other applicable regulations.
- E. Abrogation and Greater Restrictions. This chapter is not intended to repeal or impair any existing easements, covenants or deed restrictions. However, where this chapter and another code, ordinance,

easement, covenant or deed restriction conflict or overlap, that which imposes the more stringent restrictions shall prevail.

- F. Interpretation. In the interpretation and application of this chapter, all provisions shall be:
1. Considered as minimum requirements;
  2. Liberally construed in favor of the governing body; and
  3. Deemed neither to limit nor repeal any other powers granted under state statutes.
- G. Warning and Disclaimer of Liability. The degree of flood protection required by this chapter is considered reasonable for regulatory purpose, and is based upon scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This chapter does not imply that land outside flood hazard areas, or uses permitted within such areas, will be free from flooding or flood damages. This chapter shall not create liability on the part of Clark County, any officer or employee thereof, or the Federal Emergency Management Agency for any flood damages that result from reliance on this chapter or any administrative decision lawfully made thereunder.

#### **40.420.020 STANDARDS**

- A. Regulation of uses in the Flood Plain Overlay (FP) District.
1. Park, recreational, agricultural and other similar open space uses allowed in the underlying zoning district, and not involving structures, fill, or storage of equipment, are permitted outright in the FP District.
  2. Construction or reconstruction of residential structures is prohibited in the floodway, except in accordance with RCW 86.16 for:
    - a. Repairs, reconstruction, or improvements to a structure which do not increase the ground floor area;
    - b. Repairs, reconstruction, or improvements to a structure the cost of which does not exceed fifty percent (50%) of the market value of the structure, either:
      - (1) Before the repair or reconstruction or improvement is started, or
      - (2) If the structure has been damaged, and is being restored, before the damage occurred; provided, that any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by a code enforcement official or designee and are the minimum necessary to assure safe living conditions or to structures identified as historic places shall not be included in the fifty percent (50%) determination; and
    - c. Travel trailers and recreational vehicles subject to the provisions set forth in Section 40.420.020(B)(2)(d).
    - d. "New construction," for the purposes of this chapter shall mean structures for which construction begins on or after March 21, 1982.
  3. Uses Allowed with Flood Plain Review.
    - a. Any use other than those permitted outright in a floodway pursuant to Sections 40.420.020(A)(1) or (2) shall be subject to the terms of a flood plain review under Section 40.420.030.
    - b. All other uses permitted in the zoning district with which the FP District has been combined are allowed in the floodway and floodway fringe areas, subject to the terms of a flood plain review under Section 40.420.030.
- B. Construction in Flood Hazard Areas.
1. General Standards. In all flood hazard areas, the following standards are required:
    - a. Anchoring.
      - (1) All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure.
      - (2) All manufactured homes must likewise be anchored to prevent flotation, collapse or lateral movement, and shall be installed using methods and practices that minimize flood damage. Anchoring methods may include, but are not limited to, use of over-the-top or

frame ties to ground anchors, and additional techniques referenced in FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook.

- b. Construction Materials and Methods.
    - (1) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
    - (2) All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.
    - (3) Electrical, heating, ventilation, plumbing, and air-conditioning equipment and other service facilities shall be designed and/or otherwise elevated or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
  - c. Utilities.
    - (1) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system;
    - (2) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharge from the systems into floodwaters; and
    - (3) On-site waste disposal systems shall be located or designed to avoid impairment to them or contamination from them during flooding.
  - d. Subdivision Proposals.
    - (1) All subdivision proposals shall be designed to minimize flood damage;
    - (2) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage;
    - (3) All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage; and
    - (4) Where base flood elevation data has not been provided or is not available from another authoritative source, it shall be provided by the applicant for subdivision proposals and other proposed development which contain at least fifty (50) lots or five (5) acres (whichever is less).
  - e. Review of Building Permits. Where elevation data is not available either through the Flood Insurance Study or from another authoritative source (Section 40.420.030(B)(4)), applications for building permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding. The test of reasonableness shall be a judgment of the Public Works director who shall consider historical data, high water marks, photographs of past flooding, etc., where available. Failure to elevate the lowest floor at least two feet above average grade in these zones may result in higher insurance rates.
2. Specific Standards. In all flood hazard areas where base flood elevation data has been provided as set forth in Section 40.420.010(B)(2), "Basis for Establishing the Flood Hazard Areas," or Section 40.420.030(B)(4), "Use of Other Base Flood Data," the following provisions are required:
- a. Residential Construction.
    - (1) New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated to at least one (1) foot above base flood elevation.
    - (2) Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of flood waters. Designs for meeting this requirement must either be certified by a registered professional engineer or must meet or exceed the following minimum criteria:
      - (a) A minimum of two (2) openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided;
      - (b) The bottom of all openings shall be no higher than one foot above grade; and
      - (c) Openings may be equipped with screens, louvers, or other coverings or devices, provided that they permit the automatic entry and exit of floodwaters.
  - b. Nonresidential Construction. New construction and substantial improvement of any commercial, industrial, or other nonresidential structure shall either have the lowest floor, including basement, elevated to at least one (1) foot above base flood elevation; or, together

with attendant utility facilities, shall:

- (1) Be flood-proofed so that one (1) foot above the base flood level elevation and below the structure is watertight with walls substantially impermeable to the passage of water;
  - (2) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;
  - (3) Be certified by a registered professional engineer that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications and plans. Such certifications shall be provided to the responsible official as set forth in Section 40.420.030(B);
  - (4) Nonresidential structures that are elevated, not flood-proofed, must meet the same standards for space below the lowest floor as described in Section 40.420.020(B)(2)(a)(2); and
  - (5) Applicants flood-proofing nonresidential buildings shall be notified that flood insurance premiums will be based on rates that are one foot below the flood-proofed level (e.g., a building constructed to the base flood level will be rated as one foot below that level.
- c. Manufactured Homes. All manufactured homes to be placed or substantially improved within a one-hundred-year floodplain shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is at least one (1) foot above the base flood elevation and be securely anchored to an adequately anchored foundation system in accordance with the provisions of subsection 40.420.020(B)(1)(a)(2).
  - d. Travel Trailers and Recreational Vehicles.
    - (1) Travel trailers and Recreational Vehicles may be allowed in the floodway on a seasonal basis between May 1 and October 1 of the same year and within the floodway fringe areas on a temporary basis for fewer than 180 consecutive days.
    - (2) Wheels and hauling apparatus shall remain on travel trailers and recreational vehicles, and these vehicles shall be sited without barriers to allow their immediate removal in the event of impending flood hazard.
    - (3) Be fully licensed and ready for highway use, on its wheels or jacking system, attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached additions.
  - e. Critical Facilities. Construction of new critical facilities shall be, to the extent possible, located outside the limits of the flood hazard area. Construction of new critical facilities shall be permissible within the flood hazard area if no feasible alternative site is available. Critical facilities constructed within the flood hazard areas shall have the lowest floor elevated three feet above the base flood elevation or to the height of the 500-year flood, whichever is higher. Access to and from the critical facility should be protected to the height utilized above. Flood-proofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters. Access routes elevated to or above the level of base flood elevation shall be provided to all critical facilities to the extent possible.
3. Floodways. Located within flood hazard areas established in Section 40.420.010(B)(2) are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles, and erosion potential, the following provisions apply:
    - a. There is a prohibition on encroachments, including fill, new construction, substantial improvements, and other development unless certification by a registered professional engineer is provided demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.
    - b. If it has been adequately demonstrated that the encroachment will not result in increased flood levels, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of this section.

#### **40.420.030 ADMINISTRATION**

A. Establishment of Flood Plain Review. A review shall be obtained before construction or development

begins within any flood hazard area established in Section 40.420.010(B)(2). The review shall be for all structures and development as set forth in the Section 40.100.070.

- B. Application for a flood plain review shall be made to the responsible official, who shall be responsible for administering this chapter. Flood Plain Review application forms shall be furnished by the responsible official. The application shall include, but not be limited to, plans in duplicate drawn to scale showing the nature, location, dimensions and elevations of the area in question, and existing or proposed structures, fill, storage of materials, and drainage facilities. Specifically, the following information is required:
  - 1. Elevation, in relation to mean sea level as determined by the National Geodetic Vertical Datum (NGVD) of 1929, of the lowest floor (including basement) of all structures;
  - 2. Elevation, in relation to NGVD of 1929, to which any structure has been flood-proofed;
  - 3. Certification by a registered professional engineer that the flood-proofing methods for any nonresidential structure meet the flood-proofing criteria in Section 40.420.020(B)(2); and
  - 4. Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.
- C. Responsibilities of the responsible official.
  - 1. Proposed Development Review.
    - a. Review all proposed developments to determine whether or not a flood plain review is required.
    - b. Review all proposed developments with respect to the Flood Insurance Study Maps and zoning district boundaries. Make interpretations, where needed, as to the exact location of flood hazard area boundaries.
  - 2. The responsible official shall immediately forward the flood plain review application to the Public Works director, who shall be responsible for all technical aspects of the application, review, and enforcement of this chapter. The Public Works director shall render a decision on the proposal within thirty (30) days after receiving the application unless additional information is needed from the applicant, in which case a decision shall be made within thirty (30) days after receiving the information necessary to complete the review.
  - 3. Flood Plain Review.
    - a. Inform applicants about other federal, state or local permits or reviews that may be required, and provide related advice to the applicant or the Public Works director.
    - b. Accept and immediately forward flood plain review applications to the Public Works director.
    - c. Make written recommendations on flood plain review applications within the review period, when determined to be appropriate or requested by the Public Works director.
- D. Responsibilities of the Public Works director.
  - 1. Flood Plain Review.
    - a. Review all proposals to determine that the requirements of this chapter have been satisfied.
    - b. Review all proposals to determine that all necessary permits have been obtained from those federal, state or local governmental agencies from which prior approval is required.
    - c. Review all proposals to determine whether the proposed development is located in the floodway. If located in the floodway, assure that the encroachment provisions of Section 40.420.020(B)(3) are met.
  - 2. Use of Other Base Flood Data. When base flood elevation data has not been provided in accordance with Section 40.420.010(B)(2), the Public Works director shall obtain, review and reasonably utilize any base flood elevation and floodway data available from an agency of federal or state government, or other sources, in order to enforce Sections 40.420.020(B)(2) and (3).
  - 3. Information to be Obtained and Maintained.
    - a. Where base flood elevation data is provided through the flood insurance study or required as in Section 40.420.030(B)(4), obtain and record the actual elevation (in relation to NGVD of 1929) of the lowest habitable floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement.
    - b. For all new or substantially improved flood-proofed structures, verify and record the actual elevation (in relation to NGVD of 1929) to which the structure was flood-proofed, and

- maintain the flood-proofing certifications required in Section 40.420.030(B)(3).
  - c. Maintain for public inspection all records pertaining to the provisions of this chapter.
  - d. Alteration of Watercourses.
    - (1) Notify adjacent communities and the Washington Department of Ecology prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency.
    - (2) Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished.
  - e. Granting of flood plain variances in accordance with Section 40.420.030(D).
- E. Conditions for Variance.
1. Generally, variances may be issued for new construction and substantial improvements to be erected on a lot on one-half (1/2) acre or less in size, abutting and surrounded by lots with existing structures constructed below the base flood level, providing items (a) to (k) in Section 40.420.030(E) have been fully considered. As the lot size increases beyond the one-half 1/2) acre, the technical justification required for issuing the variance increases.
  2. Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in the remainder of this section.
  3. Variances shall only be issued upon a showing of good and sufficient cause that:
    - a. The proposal has been designed to reasonably minimize the impact on the floodplain and its functions; and
    - b. No increase in flood levels during the base flood discharge would result; and
    - c. The variance is the minimum necessary, considering the flood hazard, to afford relief; and
    - d. Failure to grant the variance would result in exceptional hardship to the applicant; and
    - e. The hardship is not created by the property owner or its immediate predecessor in the title; and
    - f. The granting of a variance will not result on increased flood heights, additional threats to public safety, or extraordinary public expense, create nuisances, cause fraud on or victimization of the public as identified in Section 40.420.030(E), nor conflict with existing local laws or ordinances.
  4. Variances, as interpreted in the National Flood Insurance Program, are based on the general zoning law principle that they pertain to a physical piece of property; they are not personal in nature and do not pertain to the structure, its inhabitants, economic or financial circumstances. They primarily address small lots in densely populated residential neighborhoods. As such, variances from the flood elevations should be quite rare.
  5. Variances may be issued for nonresidential buildings in very limited circumstances to allow a lesser degree of flood-proofing than watertight or dry-flood-proofing, where it can be determined that such action will have low damage potential, complies with all other variance criteria except Section 40.420.030(D)(1), and otherwise complies with Sections 40.420.020(B)(1)(a) and (b) of the "general standards."
  6. Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest floor elevation below the base flood elevation, and that the cost of flood insurance will be commensurate with the significantly increased risk resulting from the reduced lowest floor elevation.
  7. The Public Works director shall report any variances to the Federal Emergency Management Agency upon request.
- F. Appeals. Administrative decisions rendered by the responsible official or the Public Works director are subject to appeal according to Section 40.510.020.
1. In acting on appeals, the hearings examiner shall consider all technical evaluations, all relevant factors, and standards specified in other sections of this chapter; and
    - a. The danger that materials may be swept onto other lands to the injury of others;
    - b. The danger to life and property due to flooding or erosion damage;
    - c. The susceptibility of the proposed facility and its contents to flood damage, and the effect of such damage on the individual owner;

- d. The importance of the services provided by the proposed facility to the community;
  - e. The necessity to the facility of a waterfront location, where applicable;
  - f. The availability of alternative locations for the proposed use, which are not subject to flooding or erosion damage;
  - g. The compatibility of the proposed use with existing and anticipated development;
  - h. The relationship of the proposed use to the Comprehensive Plan and Flood Plain Management Program for that area;
  - i. The safety of access to the property in times of flood for ordinary and emergency vehicles;
  - j. The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters, and the effects of wave action, if applicable, expected at the site; and
  - k. The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.
- 2. Upon consideration of the factors of Section 40.420.030(E)(1) and the purposes of this chapter, the hearings examiner may attach such conditions to actions on appeals as it deems necessary to further the purpose of this chapter.
  - 3. The responsible official shall maintain the records of all appeal actions.

G. Federal Flood Insurance Program.

- 1. Established. The board assures the Federal Insurance Administration that it will take further legislative action needed to meet the requirements of Sections 1910.3 and 1910.4 of the National Flood Insurance Regulations and will take such other appropriate official actions as may be reasonably necessary to carry out the objectives of the program. Such actions will include but not be limited to:
  - a. Delineation of the limits of the areas having special flood and/or mudslide hazards on adequate maps of sufficient scale to identify the location of building sites;
  - b. Providing such information as the administrator may request concerning present uses and occupancy of the flood plain and/or mudslide area;
  - c. Maintaining for public inspection and furnishing upon request, with respect to each area having special flood hazards, information on elevations (in relation to mean sea level) of the lowest floors of all new or substantially improved structures and, where there is a basement, the distance between the first floor and the bottom of the lowest opening where water flowing on the ground will enter; and
  - d. Providing the name of the individual and the office that will be responsible for furnishing the first floor elevation information;
  - e. Cooperating with Federal, state and local agencies and private firms which undertake to study, survey, map, and identify flood plain or mudslide areas, and cooperate with neighboring communities with respect to management of adjoining flood plain and/or mudslide areas in order to prevent aggravation of existing hazards.
- 2. Administrative Authority. The board appoints the Public Works director with the responsibility, authority and means to submit on the anniversary date of the community's initial eligibility, an annual report to the administrator on the progress made during the past year within the county in the development and implementation of flood plain and/or mudslide area management measures and to implement all other commitments made herein.
- 3. Certification of eligibility. The Public Works director is authorized to file with the administrator of the National Flood Insurance Program such materials as are necessary for certification of eligibility to permit areas of Clark County, Washington, to secure flood insurance under the Federal program.